

REMARKS

I. Introduction

Claims 1-31 were pending in the application.

Claims 1, 2, 5-13, 16-19, 21-23, 26-28 and 31 stand objected to.

Claims 1-4, 6-12, and 17-31 stand provisionally rejected under nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of copending U.S. Application No. 10/510,247 in view of Passut et. al, DE 197 35 431.

Claims 1-31 stand rejected under 35 U.S.C. § 112 second paragraph as being indefinite.

Claims 1-18, 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Crockatt et al, U.S. 4,681,910 ("Crockatt"), in view of Isozaki et al, US 6,358,438 ("Isozaki").

Claim 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Crockatt et al, U.S. 4,681,910 ("Crockatt"), in view of Isozaki et al, US 6,358,438 ("Isozaki") and further in view of Passut.

Claims 1-2, 6-7, 9-13, 16-23, and 25-31 have been amended to more precisely point out the invention.

II. Claim Objections

A. Claim 1

The Examiner objects to Claim 1 stating that the term "formed of hydrocarbon chains" is superfluous and adds nothing to the claims. The Examiner objects to the use of the term "compound which is an" in paragraph (c) of claim 1 as superfluous. Applicant has amended the claim to address these objections. Applicant respectfully disagrees with examiner's objection to the use of "colloidal" to define "aqueous emulsion". Examiner argues that the use of "colloidal" is superfluous. Colloids imply very small droplets, usually smaller than 1 μm . In contrast, emulsions can exhibit quite large droplets. See Paragraph [0137]. Thus the use of the term "colloidal" to define "aqueous emulsion" is limiting and not superfluous. The Examiner objects to the use of "chosen" for Markush group construction and suggests the use of "selected." Applicant has made appropriate amendments to the claim. Finally, Examiner objects to the use of "copolymers of acrylic ... methacrylic esters" as redundant in section (d) stating that this

embodiment is fully described in lines 1-5 of section (d). Applicant respectfully disagrees lines 3-5 of section (d) refer to homopolymers while lines 6 and 7 refer to copolymers.

B. Claim 2

The Examiner objects to the use of "chosen" for Markush group construction and suggests the use of "selected." Applicant has made appropriate amendments to the claim. Examiner further objects as redundant the use of the term "of petroleum or synthetic origin." Applicant has made appropriate amendments to the claim.

C. Claim 5

The Examiner objects to claim 5 as being of improper dependent form for failing to further limit the subject matter of a previous claim. Examiner states that "the claim merely indicates the component (b) and (c) are natural or synthetic." Applicant respectfully disagrees, the term "waxes and oils" further limits the claim, which in turn limits each prior claim.

D. Claim 6

The Examiner objects to Claim 6 stating that the term "formed of hydrocarbon chains" is superfluous and adds nothing to the claims. The Examiner further objects to the use of the term "is a hydrocarbon oil" as redundant. Applicant has made appropriate amendments to the claim.

E. Claim 7

The Examiner objects to the use of "chosen" for Markush group construction and suggests the use of "selected." Applicant has made appropriate amendments to the claim.

F. Claim 8

The Examiner objects to the use of the term "formed of hydrocarbon chains" as superfluous. Applicant has made appropriate amendment to the claim.

G. Claim 9

The Examiner objects to the use of the term "hydrocarbon compound" because "an oil formed of at least one ester (c) would not qualify as a 'hydrocarbon compound,' since it contains atoms other than carbon and hydrogen. The Examiner further objects to the phrase "oil formed of at least one ester ... acid" as redundant because "it is clear ... that the oil is a condensation product and requests appropriate corrections. Applicant has made claim amendments to overcome the Examiner's objections.

H. Claim 11

The Examiner objects to claim 11 as being of improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner states "claim 9 limits the alcohol to trihydric alcohols" and thus "claim 11 can not be drawn to alcohols having 'up to five' hydric groups." The Examiner also objects to use of the phrase "participating ...and an alcohol" as superfluous. The Examiner further objects to the use of "chosen" for Markush group construction and suggests the use of "selected." Applicant has amended the claim to depend from claim 1, which recites up to five hydric groups on the alcohol, and made claim amendments to overcome the Examiner's remaining objections.

J. Claims 12, 13 and 16

The Examiner objects to the use of "chosen" for Markush group construction and suggests the use of "selected" in each of these claims. Applicant has made claim amendments to overcome the Examiner's objections.

K. Claim 17

The Examiner objects to claim 17 as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant has amended claim 17 to make it independent to overcome this objection. Support for the claim amendments is found in original claim 1 and 18. The Examiner objects to the use of term "formed of hydrocarbon chains" as superfluous. The Examiner objects to the use of the term "hydrocarbon compound" because "an oil formed of at least one ester (c) would not qualify as a 'hydrocarbon compound,' since it contains atoms other than carbon and hydrogen." Finally, the Examiner objects to the use of the term "as an emulsion in water" as redundant and requests that the Applicant replace "compositions" with "composition." Applicant has amended the claims to overcome these objections.

Applicant respectfully disagrees with examiner's objection to the use of "colloidal" to define "aqueous emulsion" as stated in subsection A above.

L. Claim 18

The Examiner objects to the use of term "are hydrocarbon chains" as superfluous. The Examiner objects to the use of the term "hydrocarbon compound" because "an oil formed of at least one ester (c) would not qualify as a 'hydrocarbon compound,' since it contains atoms other

than carbon and hydrogen.” Applicant has amended the claims to overcome these objections. Applicant respectfully disagrees with examiner’s objection to the use of “colloidal” to define “aqueous emulsion” as stated in subsection A above.

M. Claim 19

The Examiner objects to the use of term “formed of hydrocarbon chains” as superfluous. Examiner objects to the use of the term “hydrocarbon compound” because “an oil formed of at least one ester (c) would not qualify as a ‘hydrocarbon compound,’ since it contains atoms other than carbon and hydrogen.” Applicant has amended the claim to overcome these objections. Applicant respectfully disagrees with examiner’s objection to the use of “colloidal” to define “aqueous emulsion” as stated in subsection A above.

N. Claim 21

The Examiner objects to the use of the term “in the emulsion form” as redundant. Applicant has amended the claim to overcome this objection.

O. Claim 22

Examiner objects to the use of the term “hydrocarbon compound” because “an oil formed of at least one ester (c) would not qualify as a ‘hydrocarbon compound,’ since it contains atoms other than carbon and hydrogen.” Finally, the Examiner suggests the addition of “and” before the last claim element and a spelling correction. Applicant has amended the claims to incorporate these corrections.

P. Claim 23

The Examiner objects to the use of the term “at least one of said compositions” because the claim is drawn to a single composition. The Examiner further objects to the term “as aqueous emulsions” for the same reason. Applicant has amended the claim to overcome both objections.

Q. Claim 26

The Examiner objects to the use of term “formed of hydrocarbon chains” as superfluous. Examiner objects to the use of the term “hydrocarbon compound” because “an oil formed of at least one ester (c) would not qualify as a ‘hydrocarbon compound,’ since it contains atoms other than carbon and hydrogen.” Applicant has made appropriate claim amendments to overcome these objections. Applicant respectfully disagrees with Examiner’s objection to the use of

“colloidal” to define “aqueous emulsion” as stated in subsection A above. The Examiner objects to the use of term “in emulsion form” as redundant. Applicant was unable to find the phrase “in emulsion form” in Claim 26. Finally, the Examiner suggests the addition of a verb after “and water” and changing “compositions” to “composition” in the claim. Applicant has amended the claim to incorporate these suggestions.

R. Claim 27

The Examiner objects to the use of term “formed of hydrocarbon chains” as superfluous. Examiner objects to the use of the term “hydrocarbon compound” because “an oil formed of at least one ester (c) would not qualify as a ‘hydrocarbon compound,’ since it contains atoms other than carbon and hydrogen. Applicant has made appropriate claim amendments to overcome these objections. Applicant respectfully disagrees with Examiner’s objection to the use of “colloidal” to define “aqueous emulsion” as stated in subsection A above. The Examiner objects to the use of term “in emulsion form” as redundant. Applicant was unable to find the phrase “in emulsion form” in Claim 26. Finally, the Examiner suggests the addition of a verb after “and water” and changing “compositions” to “composition” in the claim. Applicant has amended the claim to incorporate these suggestions.

S. Claim 28

The Examiner objects to the use of term “formed of hydrocarbon chains” as superfluous. Examiner objects to the use of the term “hydrocarbon compound” because “an oil formed of at least one ester (c) would not qualify as a ‘hydrocarbon compound,’ since it contains atoms other than carbon and hydrogen.” Applicant has made appropriate claim amendments to overcome these objections. Applicant respectfully disagrees with examiner’s objection to the use of “colloidal” to define “aqueous emulsion” as stated in subsection A above.

T. Claim 31

The Examiner objects to the use of term “in emulsion form” as redundant. Applicant has made appropriate claim amendments to overcome this objection.

Applicant avers that no new matter has been added by any of the above stated claim amendments.

III. Claim Rejections

A. Double Patenting

Claims 1-4, 6-12 and 17-31 were provisionally rejected on the grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1-16 of co-pending application U.S. Patent Application 10/510,247 in view of Passut et. al, DE 197 35 431.

Passut describes a composition comprising 10-30 wt.% of an aqueous plasticizer-free butylacrylate copolymer dispersion, 1-10 wt.% water glass solution, 0.1 to 2.0 wt.% defoaming agent, 0.2-4.0 wt.% thixotropic agent, 0.1-10 wt.% micronised polyethylene wax, and 88.6-44.0 wt.% water. The composition of Passut is entirely different from the composition described in U.S. Patent Application 10/510,247, and there is no reason suggested by the Examiner that one skilled in the art would pick and choose certain elements of the composition described in Passut and combine those selected elements with the composition described in U.S. Patent Application 10/510,247 to arrive at the composition recited in the claims as amended. Accordingly, the rejection of claims 1-4, 6-12 and 17-31 for non-statutory obviousness type double patenting is improper and should be withdrawn.

B. Rejections Under 35 U.S.C § 112

Claims 1-31 stand rejected under 35 U.S.C. § 112 second paragraph as being indefinite. The Examiner specifically states that claim 1 argues that “for claims drawn to a composition containing all five components (a) through (e), it would appear that the entire phrase ‘comprising at least one paraffin...hydrocarbon compound’ is superfluous”. Applicant has amended the claim to overcome this rejection. Applicant avers that no new matter has been added by the amendment. Examiner also states that the term “vinyl” in claim 1 is indefinite because it “merely indicates a double bond and does not identify the monomer.” Applicant respectfully disagrees. The term “vinyl” is a, somewhat outdated, synonym for “ethylene.” Thus vinyl monomers are ethylene molecules. Support for this definition is found in paragraph [0092] and [0181]. Applicant avers that no new matter has been added by the amendment. Accordingly, applicant respectfully requests that this rejection be withdrawn.

The Examiner rejects claim 7 as indefinite for reciting a property rather than a claim limitation specifically “kinematic viscosity without an associated temperature.” Applicant has amended the claim to include “under standard temperatures and pressure conditions.” Support

can be found in paragraph [0087]. Applicant avers that no new matter has been added by the amendment. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

The Examiner rejects claim 12 as being indefinite because "it is not clear what is meant by the term 'propane-1-tri-2i-ol.'" Applicant has amended the claim to correctly spell "propane-1-tri-2-di-ol." Applicant avers that no new matter has been added by the amendment. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

The Examiner rejects claims 17-19 and 26-28 as being indefinite because "it is not clear what is meant by the term 'q.s.'" The term "q.s." means quantity sufficient and is a well known chemists terminology used to designate the ingredient used as a solvent or filler. Thus "water q.s. for 100% by weight" means "a sufficient quantity of water for making 100% of the target weight." Applicant has amended the claims to more clearly point out this term. Applicant avers that no new matter has been added by the amendment. Accordingly, applicant respectfully requests that this rejection be withdrawn.

Claim 18 stands rejected as being indefinite because the term "in the solid state" is "unclear." Applicant has removed this phrase from the claim. Applicant avers that no new matter has been added by the amendment. Accordingly, applicant respectfully requests that this rejection be withdrawn.

Claim 20, 29 and 30 stands rejected as being indefinite because "it is not clear what components are described by the claimed ratio." All three claims are meant to refer to the total of oils and paraffin wax. Applicant has made appropriate claim amendments to more precisely point out this subject matter. Applicant avers that no new matter has been added by the amendment. Accordingly, applicant respectfully requests that this rejection be withdrawn.

C. Rejections Under 35 U.S.C § 103

Claims 1-18, 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Crockatt et al, U.S. 4,681,910 ("Crockatt"), in view of Isozaki et al, US 6,358,438 ("Isozaki"). Applicant notes that the Office Action cites U.S. Patent No. 6,538,438 as the Isozaki reference. Applicant presumes that this was a typographical error and the Examiner intended to cite U.S. Patent No. 6,358,438.

The applicant respectfully maintains that the Examiner has failed to establish a prima facie case of obviousness in this case. One skilled in the art would not have predicted the results

achieved by the applicant based on the information available in the references cited by the Examiner. Accordingly, the combination suggested by the Examiner does not establish that the claimed composition is obvious. See “Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of Supreme Court Decision in *KSR International v. Teleflex, Inc.*,” 72 Fed. Reg. 57,526 (October 10, 2007)(in order to establish obviousness, must show a combination of prior elements according to known methods to yield predictable results). In the *KSR* case, the Supreme Court confirmed the application of the factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), in determining whether a claimed invention is obvious. Under *Graham*, one must consider the scope and content of the prior art and the differences between the prior art and the claims at issue to determine if an invention is obvious.

The Examiner argues that Crockatt teaches all the claim limitations of claim 1. Crockatt is directed to aqueous, air-drying latex coating compositions for protecting exterior wood surfaces. Crockatt specifically teaches a composition of aqueous wax dispersion including “a petroleum wax, a polyethylene wax and a surfactant” and an aqueous latex of emulsion copolymerized monoethylenically unsaturated monomers. Crockatt discloses a range of 5% to 50% wax by weight and 50% to 95% aqueous latex. (col. 2, lines 34-42). The Examiner states Crockatt fails to teach the “relative amounts of each type of wax” and “the density of the paraffin wax.”

The Examiner further argues that Isozaki teaches the density limitation. Isozaki is directed to an electrically conductive polymer composition. Isozaki discloses a paraffin wax having an average molecular weight of 361 (30 carbon atoms) and a melting point of 55 °C that has a density of 0.902 g/cm³. (col. 8, lines 16-20). The Examiner argues that the relative amount can be ascertained by a person of ordinary skill in the art and references four additional patents to establish this.

The three essential criteria that must each be established to substantiate a *prima facie* obviousness rejection under 35 U.S.C. § 103 are: (1) the reference must teach or suggest all the claim limitations; *In re Royka*, 490 F.2d 981 (CCPA 1974); (2) there must be a reasonable expectation of success; and (3) there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify or combine reference teachings.

For purposes of evaluating the obviousness of claimed subject matter, one must make certain that a particular reference relied upon constitutes "analogous art." In re Clay, 966 F.2d 656, 658-59 (Fed. Cir. 1992). A prior art reference is analogous if the reference is in the field of applicant's endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. In re Oetiker, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

The Examiner's obviousness rejection of 1-18, 24, and 25 based upon Crockatt is improper because (1) Crockatt is non-analogous art and (2) the examiner failed to establish a prima facie case of obviousness because the prior art does not establish the use of a paraffin wax with at least 30 carbon atoms in combination with a hydrocarbon oil having less than 30 carbon atoms as recited in the claims as amended.

Crockatt is directed to aqueous, air-drying latex coating compositions for protecting exterior wood surfaces. In order for a reference in a different field of endeavor to be properly considered as prior art, the reference must logically commend itself to an inventor's attention in considering the invention as a whole. See MPEP § 2141.01; In re Deminski, 796 F.2d 436 (Fed. Cir. 1986). There is no logical reason that a person of ordinary skill seeking to ensure the retention of water necessary for the setting of concretes or mortars, while providing adhesiveness to the finished material, would look to a solution provided from wood coatings, and the Examiner has not provided any reason. Protecting exterior wood surfaces does not require the retention of water in the wood. Most exterior woods are specifically treated to remove as much water as possible from the wood prior to placement. Thus, unlike in setting concretes or mortars there is no need to retain water in wood surfaces. Furthermore, exterior wood does not have a smooth surface necessitating the addition of coating material to provide adhesiveness. Rather, every effort is made to smoothen the surface of exterior wood so that any coating can provide a uniform level of protection. The slightest irregularity in the surface can prevent the uniform spread of the coating, thereby allowing water to seep into the wood and eventually rot the wood.

For the forgoing reason it would not have been obvious to one skilled in the art that there was a reasonable expectation of success if they were to use a wood coating to help set concrete or mortar. Water retention is of paramount importance in setting concrete and mortar and an exterior wood coating would not logically provide a solution. Wood is treated to remove water before being used. Thus there is no logical reason to assume a coating used to protect wood

from water would retain any water already present in an object. Accordingly, Crockatt is non-analogous art, and for at least this reason, the rejection of claims 1-18, 24 and 25 is improper and should be withdrawn.

Even if Crockatt were analogous art, which it is not, the Examiner has failed to establish a *prima facie* case of obviousness in light of the currently amended claims. In order to establish *prima facie* obviousness of a claimed invention under 35 U.S.C. § 103(a), all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03, citing In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). These claims cannot be rendered obvious by the combination of Crockatt and Isozaki because all of the claim limitations, as amended, are not taught, claimed or suggested by the prior art. In particular, Crockatt discloses the use of “a paraffin wax” in combination with “a polyethylene wax” and “a surfactant” to produce the aqueous wax dispersion combined with the aqueous latex. (col. 3, line 35-40). The Examiner states that Crockatt discloses paraffin waxes containing 30-32 carbon atoms and exhibiting a melting point between 50-70°C meet the requirements for component (a) in the instant claims. Furthermore, the Examiner states that Crockatt also discloses paraffin waxes containing 18 to 29 carbon atoms in the chain meet the requirements set forth in component (b) of the instant claims. The Examiner’s reading of Crockatt is incorrect.

Crockatt discloses the use of only one paraffin wax with n between 18 and 32. Col. 3, lines 41-54. The second component in Crockatt is a polyethylene wax having an average molecular weight greater than 10,000. Col. 3, lines 55-57. This wax necessarily has more than 30 carbon atoms based on the molecular weight, and the polyethylene wax therefore does not meet limitation (b) of claim 1. There is nothing in Crockatt which teaches or suggests the use of a combination of paraffin waxes with some having at least 30 carbon atoms and some having less than 30 carbon atoms, and there is no reasonable basis from the description in Crockatt to conclude that such a combination of paraffin waxes is desirable or advantageous. Moreover, there is nothing in Crockatt that suggests that the polyethylene wax used in the compositions in Crockatt could be replaced by a paraffin wax having less than 30 carbon atoms. The amended claims recite a paraffin wax having 30 or more carbon atoms (component (a)) and a hydrocarbon oil with less than 30 carbon atoms (component (b)). There is nothing in Crockatt that describes

or suggests such a combination for any reason, much less for use to retaining water in concrete or mortar as it sets.

Isozaki does not address this deficiency in Crockatt. Isozaki describes the use of a single paraffin wax in a comparative example of an electrically conductive polymer mixture. There is no reason that one skilled in the art would look to electrically conductive polymer mixtures to address the problem of retaining moisture in setting concrete or mortar. Moreover, Isozaki describes combining a high density polyethylene polymer having a molecular weight of about 350,000 with a paraffin wax having an average molecular weight of 351. Isozaki does not describe or suggest combining a paraffin wax with at least 30 carbon atoms and a hydrocarbon oil having less than 30 carbon atoms as recited in the claims as amended.

Claim 16 stands rejected under 35 U.S.C. § 103 based upon Crockatt and Isozaki in further view of Passut. Passut describes a polyethylene wax provided in pulverized form. Passut does not describe a combination of materials as recited in the claims as amended, and therefore Passut does not address the deficiencies in Crockatt and Isozaki. Accordingly, the rejection of claim 16 is improper for the reasons stated above and should be withdrawn.

For at least the foregoing reasons, applicant has overcome the Examiner's rejections. Applicant has not explored other possible reasons for traversing such rejections. Nonetheless, Applicant expressly reserves the right to do so, if appropriate, in any future response or proceeding.

Because the only rejections of claims 3, 14, 20, 24, 25, 29 and 30 was to the form of the claims, and the claims have been amended to address all form and indefiniteness rejections, these claims are allowable as amended.

IV. Conclusions

The foregoing is believed to be fully responsive to this office action. The present invention is believed to be allowable over the prior art of record. Consideration and allowance of the claims is respectfully requested.


If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned. If the Examiner has any questions in connection with this paper, or otherwise if it

would facilitate the examination of this application, please call the undersigned at the telephone number below.

A Petition for a Two Month Extension of Time extending the date to reply to the Office Action until Sunday, March 8, 2009 has been filed herewith. This paper is timely filed on the first following business day. Applicant believes that no additional fees are due in conjunction with submission of the current response. If, however, any required fee has been inadvertently overlooked, Commissioner is hereby authorized to debit any required fee or credit any overpayment to Deposit Account No. 503571.

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Respectfully submitted,


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